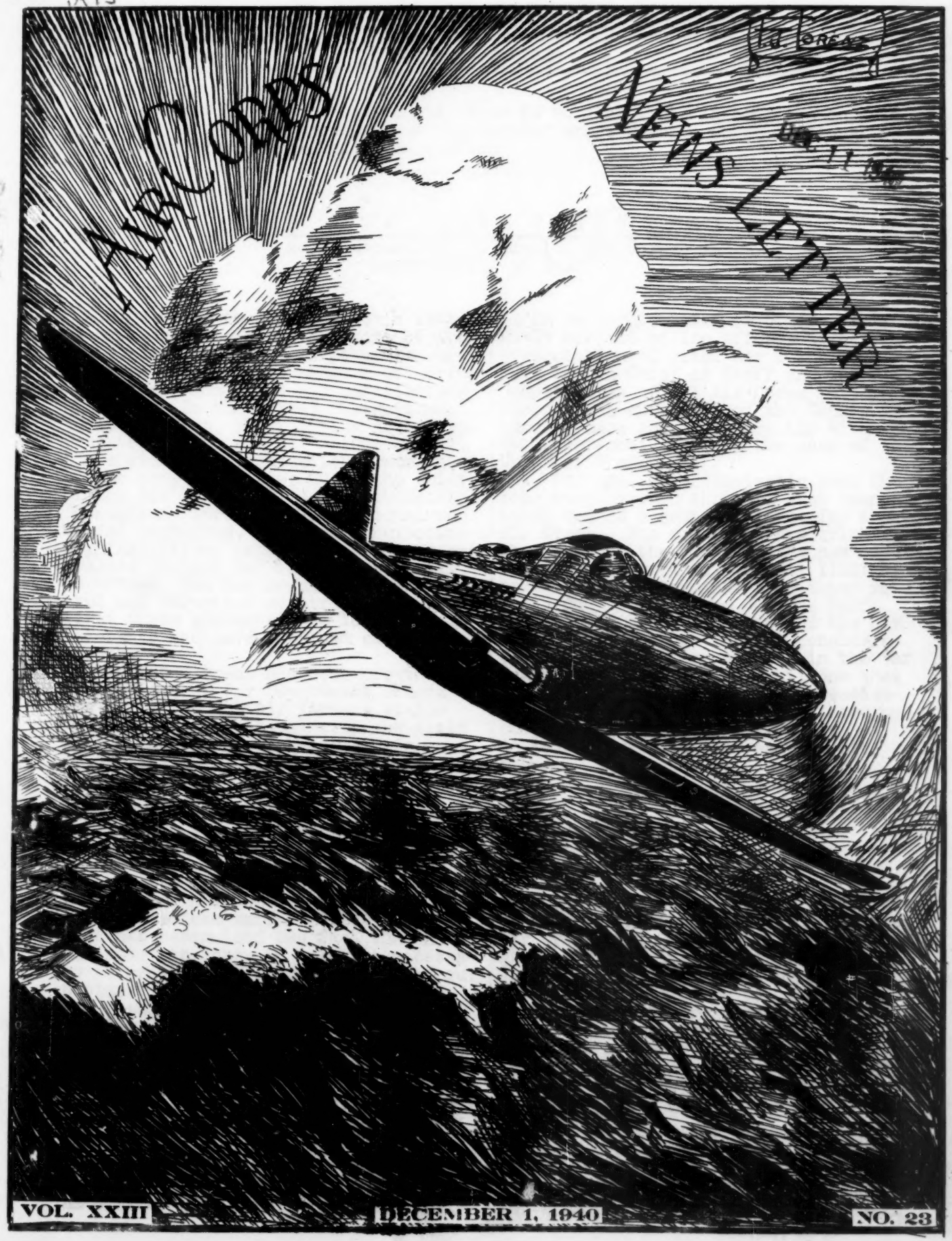
East Engin. Library
UG
633
.A43



VOL. XXIII DECEMBER 1, 1940 NO. 23

VOL. XXIII AIR CORPS NEWS LETTER NO. 23.

Intelligence Division
Air Corps

December 1, 1940

Munitions Building
Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

THE NEW AIR CORPS ERA

Major General H. H. Arnold, Air Corps,
Deputy Chief of Staff

Air power is the power which a nation is capable of exerting by means of its air forces. Maximum air power can be attained only through maximum effectiveness of all component and contributory elements. In the United States these include, first, the fighting units represented by the GHQ Air Force; second, the sustaining organization represented by the many activities under the Chief of the Air Corps; third, the industrial foundation represented by national material resources, aviation manufacturing facilities, commercial airlines and private flying; and last, but vitally important, the top organization for control and direction of Air Power. The first three elements have long been in existence and have attained substantial growth.

The last element has been provided through recent War Department orders giving to the GHQ Air Force a status coordinate and co-equal with the field armies under General Headquarters, and appointing an experienced Air Corps officer as Deputy Chief of Staff. This newly created office affords direct presentation of vital Air Corps problems to the Chief of Staff and insures coordination of all Air Corps matters through the authority of the Deputy to issue orders and deal directly with the War Department staff in the name of the Chief of Staff.

I, for one, am enthusiastic over the long step forward that has just been taken toward a sounder status for the Air Corps. The prospects are brighter than ever in the past. In my new office I shall work to the full limit of my ability to coordinate the inter related functions of the GHQ Air Force and the Office of the Chief of the Air Corps and to assure earnest consideration of the problems of both in the War Department staff. I am confident that the traditional spirit of progressiveness, cooperation and loyalty throughout the Air Corps will give this nation security in the realm of Air Power.

Lieut. General Delos C. Emmons, U.S. Army,
Commanding G.H.Q. Air Force

Air Power has demonstrated its importance in modern warfare. Our government has recognized the fact that an adequate Air Force in being is necessary to provide the proper support of our national policies. This recognition has resulted in a large expansion of the Air Corps and has necessitated certain modifications of our organization in order to insure its efficient administration, operation and supply. Changes of far reaching importance have recently been announced by the War Department.

The creation of the post of Deputy Chief of Staff to deal with Air Corps matters and the appointment thereto of an officer of General Arnold's experience and outstanding ability insure the best representation and coordination of air problems in the office of the Chief of Staff. Placing the Air Force under General Headquarters will permit the Chief of the Air Corps to concentrate on the tremendous responsibilities which are his concern. Giving the GHQ Air Force a status equivalent to that of thefield armies is appropriate recognition of the importance of air power and will facilitate greatly its training and operations.

These changes are indicative of our progress - progress which has resulted from the loyal cooperation and conscientious effort of all Air Corps personnel. The greater demands of the future will

V-8651, A.C.

be met by increased effort to insure the attainment of our common purpose - adequate Air Power.

Major General G.H. Brett, Air Corps,
Acting Chief of the Air Corps

The recent War Department action in appointing General Arnold to the position of the Deputy Chief of Staff and giving General Emmons a status coordinate with the commanders of the four field armies under General Headquarters marks the beginning of a new era in the progress of the Army Air Corps. The effect on the functions of the Office of the Chief of the Air Corps is chiefly to relieve it of direct responsibility for the training and administration of the GHQ Air Force. This is a necessary and a welcome change in that it permits the Chief of the Air Corps and his staff to concentrate on their more appropriate functions. These include, first, the basic training of personnel, both commissioned and enlisted, prior to their initial assignment to combat units and the advanced training of individuals in specialized subjects; second, the procurement, issue, maintenance and repair of Air Corps equipment of all kinds; and, third, the thousand and one miscellaneous and necessary but burdensome duties that devolve on the Chief of an Arm or Service in the War Department.

The primary role of the Office of the Chief of the Air Corps in the complex machinery of the Army is thoroughly appreciated, namely, to support and assist the efforts of the GHQ Air Force to attain the highest possible standards of combat efficiency. The size and difficulty of our task have grown greatly with the tremendous expansion of the Air Corps, the growing importance of Air Power and the danger of involvement of the United States in the present World War. But with our objective constantly in mind with our firm resolve to cooperate fully in the solution of our mutual problems, and with the benefits that will necessarily result from the recent changes referred to, I am confident that we shall be able to maintain, and where possible improve on, the high standards of performance that have ever been the pride of the Air Corps.

---oOo---

THE MARKER BEACON RECEIVER SITUATION
By the Materiel Division Correspondent

One of the handiest aids ever conceived for navigation along the airways is the new marker beacon receiver. This receiver gives a visual indication of position over CAA 5-watt, cone-of-silence, "Z" markers and over 100-watt fan markers. If the airplane is equipped with a radio compass and one of the new type marker beacon receivers, all the pilot has to do to find the cone of silence is to home on the CAA radio facility, and when the light comes on he knows that he is over the cone. This can be checked aurally by listening in to the radio compass. The fan markers are located at definite points along the legs of the radio ranges and flash a characteristic signal. The one in the northeast quadrant flashes one dot, southeast two dots, southwest three dots, and northwest four dots. When the fan comes on, the pilot gets a visual indication of position, and by reference to the Radio Facility Charts knows exactly how many miles he is out from the radio range station.

The first need for a visual marker beacon arose when the Army A-1 Instrument Landing System was conceived. This system has a 25-watt marker transmitter on the ground at each instrument landing truck. The marker is essentially a fan type marker which operates a visual signal on the instrument board when the airplane passes over. The requirement in altitude was for operation up to 3000 feet. This was before the advent of the cone-of-silence "Z" markers and fan markers on the airways. When the CAA installed 5-watt "Z" transmitters, the old marker beacon receiver would only give 500 feet over the "Z" markers and from 3000 to 7500 feet over the 100-watt fans, necessitating a redesign of this receiver.

The redesign of the marker beacon receiver has been completed, and a quantity has already been procured. The receiver with complete equipment is known as Marker Beacon Receiving Equipment RC-39 (RC-43 for 24-volt airplanes). It is a 3-tube receiver much more sensitive than the old one, and specifically is capable of receiving the "Z" markers to well over 20,000 feet.

These new receivers are being installed on new airplanes equipped with radio compasses being delivered at the present time, and technical orders and installation instructions are being issued for effecting such installation on the following airplanes already in service: O-47A, B-17B, BC-1A, C-45, O-47B, C-33, AT-6, B-18A, A-17A, C-39, and F-2. The new receiver is the same size as the old one and necessitates only a change in the plug connection and antenna system on the airplane.

This receiver has already been improved in design so that we get still better performance on only two tubes. This newest receiver will go above 20,000 feet on the "Z" markers. It is being procured in quantity for installation on airplanes farther along in the expansion program.

---oOo---

NEW BUILDINGS AT WRIGHT FIELD
By the Materiel Division Correspondent

Power Plant Laboratory.

Although the day of the 8000 h.p. engine is still definitely in the future, the Materiel Division, Wright Field, Dayton, Ohio, is building test equipment on that design premise at Wright Field now. It will be prepared to test engines of that power and all the accessories when they do arrive. Much of this equipment will be installed in the new dynamometer building of the Power Plant Laboratory, which is 80 per cent complete. Where existing equipment can take up to 1500 h.p. from engines in simulated altitude tests, or draw out 3000 h.p. in endurance tests, the new equipment will step up the capacity to 8000 h.p. at moderate altitudes, or somewhat lesser power up to 30,000 feet.

Anticipating the current inventive trend, the new dynamometers are designed to absorb 8000 h.p. from a single engine shaft, or 4000 h.p. from each of two concentric, oppositely rotating shafts. One dynamometer has a hollow shaft. Included in this project are an enlarged carburetor laboratory, improved facilities for testing oil coolers, engine radiators, other aircraft heat exchangers, a complete new unit for testing superchargers under altitude conditions, and an electric switchboard building.

For nearly two years a Laboratory Design Unit, composed of nine engineers and thirteen draftsmen, under the direction of C.E. Mines, has been working out the details of design, installation, and functioning of this $2,500,000 addition to the Power Plant Laboratory. An intricate layout of refrigeration, ventilation, air ducts, water pipes, gas, oil, ethylene glycol pipes, hydraulic power, compressed air and others honeycomb the structure. The design is purposefully flexible to accommodate many tests simultaneously. Pressures, temperatures, velocities, exhaust-disposing and exhaust-creating equipment will be controllable to the nth degree to create virtually a chemical city.

Nearby, two of the contemplated four new torque stands are 50 percent complete. With test cells 45 feet square, and 80-foot stacks to reduce noise, they will boost the power-taking capacity from 2500 h.p. with propellers not over 17 feet in diameter to 8000 h.p. with 40-foot propellers.

To provide for increased personnel, to give adequate drafting room space, and to free the former office space for the engine disassembly shops, the new 350,000 cubic foot office building has been completed and is in partial use.

Wind Tunnel.

Overshadowing all other new construction with its sheer bulk, the 400 m.p.h. wind tunnel is taking form on the hill. The exterior shells of the brick power building, which will house the 40,000 h.p. electric motor, and the heavily reinforced concrete test chamber are nearly finished. Workmen will move inside to install equipment when cold weather sets in.

Steel erecters, riveters, and welders are swarming over the circular tunnel sections and curved vanes as they are hoisted into place by two huge derrick rigs. The finished tunnel will be rectangular to form a circuit one-seventh of a mile in length. Two 40-foot fans in tandem will create the wind stream. It is a single-return type, with a 20-foot nozzle in the test chamber. Both open and closed throat will be used.

At times, pressure within the test chamber will be 265 pounds less than the atmospheric pressure outside. Hence the heavily reinforced concrete structure. An "air lock" entry is designed to condition personnel entering and leaving during tests.

Other Projects.

Either the wind tunnel or the dynamometer building would be of sufficient importance to deserve notice but, besides these, a contract has just been let for a north addition to the Admin-

istration Building. This will be a two-story steel and cinder block structure, 65 feet by 395 feet.

Interspersed with major projects, utilities have been expanded and extended, roadways widened, parking lots built, wells drilled, and a new boundary fence thrown up around the field as necessary parts of a $6,500,000 expansion program.

---oOo---

WRIGHT FIELD HAS VISITOR FROM THE NORTH

Major Dale V. Gaffney, of the so-called Polar Bear Squadron, Fairbanks, Alaska, paid a visit to Wright Field, Ohio, on October 30th, for the purpose of consulting with officers and engineers regarding cold weather flying equipment. For information received, Major Gaffney returned some of a most interesting nature. "The new cold weather experimental station in the Arctic Circle will receive a real test of the rigors of an Alaskan winter this year," he said. "Hangars will not be available before next year, and the planes will stand in the open during 60 degrees below zero weather. Despite the fact that the temperature falls to below zero 116 days out of the year and that there are only a few hours of daylight during December and January, a full complement of working hours are planned for each working day all year."

At present, 14 officers and 200 men make up the garrison of Ladd Field. When this field is completed, there will be about 30 officers and 300 men, and planes of all types. Temporary barracks are now available, and quarters for married officers and noncommissioned officers will be finished by December 1st.

Despite Major Gaffney's statement to the effect that there was nothing romantic about 40 deg. below zero - and we believe it, for Dayton gets cold enough - nevertheless the tinge of adventure clung about the Major and his assistants as we watched them take off for the far lonely stretches of snow-packed fields, with such ideas as "huskies," "airplane skis," and short, half-dark days flying through our head. You just can't keep romance out of things one knows so little about.

---oOo---

The combination hose and ladder truck recently put into service in the fire department at Wright Field is equipped with 200 feet of ladders, 1400 feet of hose, 400 pounds of carbon dioxide, a 100-gallon booster tank and two foam distinguishers. Shelter for this truck is being provided by an addition at the rear of the firehouse.

GOOD PARACHUTE JUMPERS DIE IN BED

The organization of parachute troops in the U.S. Army lends added interest to the following contribution of the News Letter Correspondent from Chanute Field, Rantoul, Ill.:

"The general public doesn't think much of my former occupation," Private Ronald Colwell, a Chanute Field soldier, stated in a recent interview.

Colwell is not just another private among so many soldiers; he has an interesting background and his career has certainly been an absorbing one. During the past eleven years he was an exhibition parachute jumper - with 521 jumps to his credit.

Colwell enlisted at Harrisburg, Pa., on October 1st for service with the Army Air Corps at Chanute Field. A thumbnail biography of this man would read something like this: "Son of Mr. and Mrs. Harry Colwell, 241 Ohio Street, Reynoldsville, Pa.; member of the Caterpillar Club and National Association of Parachute Jumpers - formerly secretary of the 3rd Corps section of the latter organization; jumped at practically all National and International Air Races, held at Miami, Los Angeles and Cleveland; also made exhibition jumps in three provinces of Canada; former member of the famed 'Flying Falcons' aerial circus."

"Sure, I've been scared," Colwell replied to our inquiry. "It happened several years ago at the Bernard Airport, Youngstown, Ohio. I was only about 100 feet off the ground when a plane - the pilot did not see me - passed about 25 feet below me. The 'prop-wash' caught the chute, throwing me around like a cork on a rough sea, twisting the shroud lines.

"You can bet that I worked plenty fast to clear them and I <u>was</u> scared - plenty scared."

Once Private Colwell spent 27 weeks in a hospital. That happened back in 1932 at the Ohio State Fair. On the third day of successive jumping, Colwell was blown by a severe wind against the wall of a football stadium, suffering fractures of both shoulders, thigh bone, 7 broken ribs, injured knee-cap and left wrist. But - he believes parachute jumping is safe. "Accidents are caused by carelessness and the good jumpers die in bed," he said.

Colwell made an intensive study of parachute jumping and derived the following conclusions from observation over a period of eleven years of consistent exhibition jumps. Contrary to popular belief, a human does not lose consciousness after falling from high

(Continued Page 11)

AIR CORPS USED INVISIBLE LIGHT IN NIGHT FLIGHTS
By the Materiel Division Correspondent

Invisible light smacks of an anachronism. Invisible light, however, is used in the new fluorescent system of illuminating airplane instrument panels which was developed for the U.S. Air Corps by the Materiel Division at Wright Field, Dayton, Ohio.

Designed to provide light without glare, this system has been standardized after four years of experimental development by Wright Field engineers working in conjunction with commercial firms.

Air Corps pilots who flight-tested it under all conceivable conditions encountered in night flying were particularly impressed with its performance in night formation flying, night landings, and in the tricky half-light of dawn and dusk.

The invisible light is easy on the eyes during the long-range missions wherein the pilot is obliged to read the instruments for hours on end. And since even illumination is provided with a low level of light intensity, there is less contrast between the inside of the airplane and points outside, an immense advantage when a pilot is making a split-second check of his position in relation to other airplanes in a formation, or when accomplishing a night landing.

Other points of superiority over the superseded systems are that costs are reduced, wattage is less, service life is longer, and maintenance is greatly simplified. England, speedily aware of the desirability of the new lighting system, sought and is getting it installed on certain airplanes purchased in this country. It is logical to expect that any airline with extensive night-operation schedules will want it.

For a demonstration of how invisible light is used to illuminate the instruments of a tactical airplane, we will escort you, in imagination, one night out to the flying line at Wright Field. Seated in the dark cockpit of a twin-engine Bomber, you hear the pilot snap a switch. In no time the figures, scale divisions, and range markers on some twenty instruments take shape in the darkness. Some are red, and contrast very sharply with others in vivid and a darker green. They are easier to read than the speedometer in your car. Yet the light is soft and there is no glare.

The pilot tells you that luminous paint was applied to standard instrument dials. It is like the radio-active paint used on watches and clocks. Invisible light from three fluorescent lamp assemblies rigidly mounted between the seats and instrument panel is activating the luminous paint so that all the figures stand out with extraordinary clearness. Near the pilot is another lamp assembly attached to a flexible cable, enabling him to move it to any desirable position for the reading of maps or indicators.

Back of this achievement are a long series of laboratory tests and extensive flight tests. For the first attempt, a large fluorescent lamp was employed. Because of its size, it was necessarily mounted in back of the pilot. This set-up was unsatisfactory because the pilot's eyes became "fluoresced" from intercepted ultra-violet light. Looking into them one could see the deep weird glow that a hunter sees when an animal's eyes are caught in the rays of a spotlight. This condition was not necessarily painful, but vision was radically impaired until the effect wore off. A special disadvantage, of course, lay in the fact that a pilot could not park and wait for the "fluorescing" to wear off.

With the need for a small ultra-violet light source that could be controlled and located between the pilot and instrument panel thus indicated, the lamp industry developed a 4-watt, 6-inch fluorescent lamp. A special curved ultra-violet filter glass was built into the lamp housing. This glass filters out the dangerous (germicidal and tanning) rays which might be injurious.

A vibrator type of inverter was designed to change the airplane battery voltage (direct current) to the 110 volt AC required for fluorescent lamps, together with an auxiliary which reduces the voltage to 45 volts when the lamp arc is established.

As one of the final tests of the project, the fluorescent system, the individually lighted system, and the argon system were tested together for comparison in the Aero Medical Research Laboratory at Wright Field. For this investigation, two men with normal vision were chosen. For ten consecutive days, each of the men was exposed to each of the systems in a dark room for seven hours daily. Each wrote daily accounts of his impressions with particular reference to eye strain and fatigue, visibility of the dial figures, glare, and other pertinent observations. Their eyes were examined at the end of each day.

Conclusions drawn from the findings were to the effect that the fluorescent system was definitely superior. It gave no glare from reflected light, supplied even and adequate illumination, and did not cause eye strain, since the dial numbers were easily visible and readable.

An ingenious adaptation of invisible light has given the Air Corps, the "Eyes of the Army," better sight at night.

---oOo---

NEW TRAINING PLANES ARRIVE AT MOFFETT

Two mass flights of training planes - one of them said to be the largest mass delivery of planes on the Pacific Coast- have brought the airplane strength of Moffett Field, Calif., up to almost the 100-mark during the middle of November.

On Saturday, November 9th, fighting bad weather which added about an hour to the flying time for the flight, 31 new Vultee BT-13 training planes made the hop from March Field to Moffett Field. Starting earlier in the day, the flight was up for a while, but inclement weather forced it to turn back to March Field. Later, the flight was able to come through, but newspapermen and photographers who braved a nasty day to witness the arrival had to wait until nearly dark, although the planes were scheduled to come in early in the afternoon. Two additional planes followed the next day, the pilot of one having been granted authority to remain overnight in Los Angeles, while the other one had a flat tire at March Field. Thus, Moffett Field received a total of 33 new "Flying Classrooms."

An interesting sidelight incident to the second mass delivery, in which 17 BT-13's were involved, was the fact that workers at the Vultee factory in Downey, Calif., were on strike at the time the planes were to be turned over to the Army. Union leaders informed the members of the picket line not to molest the Army in any way, and the officers went through the picket line without any hindrance. The pilots themselves rolled their ships from the hangar and, despite the arguments that were taking place between the company and its employees, a cheer went up as the ships took off.

Scheduled to make the trip on Sunday, the ferry pilots took to the air, but returned after being aloft only twenty minutes, bad weather conditions forcing them to return to March Field, where they spent the night. On the following day they met with more favorable weather, although over the mountains they encountered headwinds which reached a velocity as high as 90 miles an hour. The trip was made without incident, although the arrival at Moffett Field was an hour later than scheduled.

Flying over the field while Brigadier General Henry W. Harms, Commanding the West Coast Air Corps Training Center, was observing from the hangar, the planes swooped down and landed, while the news cameras clicked.

One of the outstanding features connected with the second trip was the reunion at the Vultee plant of Major John A. Macready, Operations Officer of Moffett Field, and Major Oakley G. Kelly, Air Corps Representative at this aircraft factory. These two officers made aviation history in 1923 when they flew non-stop from New York to San Diego, Calif., in 26 hours and 50 minutes, it being the first time the American continent had been spanned in a single hop. Majors Kelly and Macready had not seen each other for several years. The latter was recently called back from civil life for duty at Moffett Field.

---oOo---

INFORMING THE PUBLIC ON FLYING TRAINING

Some of the widespread interest in the Flying Cadet training program which is being evidenced by the people on the West Coast is in a measure responsible for the greatly increasing number of requests received at Moffett Field, Calif., for speakers therefrom to appear before civic and service organizations.

Major Burdette A. Palmer, Public Relations Officer at Moffett Field, has delivered talks on numerous occasions, and several other officers have also been pressed into service for luncheon engagements before civic groups. In addition to the speeches off the field, an effort is being made to give a more adequate tour of the field to organized groups visiting it, with at least one officer unofficially assigned to the task of escorting them. In addition to visiting the hangar and viewing the training planes, short talks are made to these groups on various phases of the operation of an Air Corps post and on other interesting portions of the field.

---oOo---

A total of 121 graduates of Class 41-C from the primary training detachments at Cal-Aero Academy's Glendale, Ontario and Oxnard Training Centers in California, left for Randolph and Moffett Fields. Their places were scheduled to be taken on Nov. 30th by nearly double that number of new Cadets.

DEDICATION OF NEW HEMET AIR CORPS SCHOOL

The Ryan School of Aeronautics' new branch Air Corps pilot training school at Hemet, Calif., was dedicated on Armistice Day "to the advancement of American aviation and national defense." Nearly 6,000 people, the largest crowd ever gathered for a similar event in the Hemet valley, witnessed the ceremony.

The dedicatory address was made by Brigadier General Henry W. Harms, of Moffett Field, Calif., commander of the West Coast Air Corps Training Center. Of particular interest was his declaration that enlargement of the Hemet School is a prospect for the immediate future.

The dedicatory program was opened with the presentation of an American flag, the gift of the D.A.R., to the Ryan School. Cadets at the field stood at attention, forming a semi-circle about the flagpole in front of the Administration Building.

Mr. Earl D. Prudden, Vice President of the Ryan Company, acted as master of ceremonies during the dedicatory rituals at the field, speaking from a flag-bedecked stand erected between the two large hangars.

Following the playing of an inspiring march by the Hemet band, 125 Cadets from the Hemet school and 60 from the Air Corps Training Detachment at the Ryan School in San Diego, lined up on the flying line for an inspection. In the reviewing party were Brigadier General Henry W. Harms; Captains Kenneth P. McNaughton, supervisor of the three West Coast primary schools; Lloyd P. Hopwood, Commanding Officer of the Army Air Corps Detachment at the Hemet Field, and Mr. T. Claude Ryan, President of the Ryan Aeronautical Company.

Reviewing his first contacts with Hemet in efforts to locate the school in the valley, Mr. Prudden paid tribute to Hemet men who, he said, were instrumental in bringing the Ryan School there.

Mr. Ryan spoke briefly and introduced the speaker of the day.

General Harms highly praised the Hemet School and complimented the young men of the cadet corps, declaring that they are of the finest type of youthful Americans and compare favorably with men being accepted at West Point.

A feature of the civic Armistice Day parade in Hemet was the appearance of 100 cadets from the Ryan School of Aeronautics. These young men, clad in their immaculate gray uniforms, were applauded by the spectators as they marched by with military precision.

A MERCY FLYING MISSION IN PANAMA

Inhabitants of the Ancon Hill area were doubtless aroused early on the morning of October 31st by the whine of a low flying airplane attempting to land at Albrook Field, Panama Canal Zone. This disturbance was necessitated by the sudden illness of Private Lincoln W. Allen, of Company M, 5th Infantry, who was reportedly stricken with acute appendicitis at the Rio Hato Training Camp and consequently was being rushed to Gorgas Hospital.

The pilot, 2nd Lieut. Marshall P. Camp, took off from the Rio Hato airdrome with his passenger at 1:30 a.m., and arrived over Albrook Field about twenty minutes later. As a result of low clouds and an early morning haze, the landing lights on the airplane were ineffective, and parachute flares were no better, but the floodlights on the field were shortly switched on and a waiting ambulance rushed the patient to the hospital by 2:15 a.m., exactly 45 minutes after leaving Rio Hato.

By these extraordinary means did the Army concentrate its varied resources in furnishing Private Allen with effective aid when his life may have been in jeopardy.

---oOo---

FT. LOGAN TO BE TURNED OVER TO AIR CORPS

An announcement by the War Department under date of November 20, 1940, is to the effect that Fort Logan, Colorado, will be turned over to the Air Corps on or about January 15, 1941, to function as a sub-post of Lowry Field, Colo., for use in the training of Air Corps Administrative and Technical Clerks. The personnel involved in the move of the Department of Clerican Instruction from Lowry Field, seven miles away, number about 1,000 (commissioned and enlisted strength).

The move is necessitated by the accelerated training rate for Air Corps enlisted technicians required by the 54 Combat Groups program recently announced, which increases by approximately 400% the number of students scheduled to attend classes at Lowry Field. In addition, plans for the training of Flying Cadets in Armament and Photographic courses would further tax the facilities of Lowry Field. The training of administrative and technical clerks does not require the use of flying facilities in connection with the course of instruction.

As a result of the turn-over to the Air Corps, the 18th Engineer Regiment

(Continued on Page 8.)

OFFICERS JOIN IN A RADIO BROADCAST

By the Materiel Division Correspondent

On Thursday, November 7th, by special permission of the War Department, the famous Vox Pop radio program was broadcast from the Officers' Club at Patterson Field, Fairfield, Ohio, with officers and one officer's lady serving as the quizzed participants in the program, and the officers of Wright and Patterson Fields and their families forming the audience. The lounge was quite crowded for the occasion, and a spirit of merriment prevailed as catch questions were directed at the "quizees" who in most instances came back with accurate and snappy replies.

First to step up to the microphone was captain M.M. Beach, of the 10th Transport Group. Lieut. Colonel and Mrs. G.C. Kenney, the latter being the only woman participant, followed. They formed a fortunate duet, for what one didn't know the other supplied.

Captain R.H. Dunlap, of the 5th Corps Area, gave along with his answers a boost for enlistment in the U.S. Army Air Corps, briefly pointing out the advantages to recruits of this service. Captain H.F. Gregory followed and, when stumped, gaily threw his question to brother officers of the audience.

Lieut. Colonel Lester T. Miller, Commanding Officer of the Materiel Division, was questioned briefly regarding Wright Field activities, and answered easily questions which would have undoubtedly nonplussed one possessed of less military background. Captain Mark E. Bradley, Pursuit Airplane Project Officer, was questioned regarding methods and sensations of test piloting Pursuit airplanes, information which undoubtedly held something of a thrill, not only to the thousands of non-military listeners, but also to some of the group surrounding him. Questions skipped from stratosphere to troposphere, from planets to names of battles.

The last participant was 2nd Lieut. Harry J. Sands, of the 5th Transport Squadron, who guessed the nearest correct number of dimes in a can of tobacco, therefore winning a prize at which each participant had had a chance.

Long experience made the successful arrangements of technical matters by those in charge of the program inevitable, and the ease of handling the participants by the program directors dispelled any sense of nervousness and induced the atmosphere of mirth and congeniality which prevailed. Reports from those listening in from the outside indicate that this spirit extended on the ether waves far beyond Patterson Field. We hope so, for it was great fun.

---oOo---

COMPLETION OF TESTS OF P-39 AIRPLANE

The War Department announced, under date of November 27th, that accelerated firing tests of the armament in the P-39 Pursuit airplane have been concluded with satisfactory results. The P-39 (Airacobra), single-engined, single-seater type, is armed with a 37 mm. cannon and machine guns. For more than a week, three pilots alternately flew the P-39 from Buffalo Municipal Airport to a point in Lake Ontario, off Fort Niagara, and fired at targets in the water. In all, 40,000 rounds of machine gun ammunition and 500 rounds of 37 mm. cannon shells were fired from the plane to test the guns and the plane's other installations.

The procedure in accelerated gun-firing tests called for Army Ordnance experts to load the guns at the Buffalo Municipal Airport and then the plane to be flown to Fort Niagara, about 15 minutes away. Over the Fort, the P-39 was dived on the targets anchored in the Lake with fire pouring from cannon and machine guns. Upon firing all of the ammunition, the airplane was returned to the Buffalo Airport for reloading. The tests involved about seven flights a day.

The Air Corps pilots who flew the plane reported great accuracy of fire from long ranges was achieved with the cannon, which is mounted in the nose firing through the propeller hub. The machine guns, also mounted in the nose, are synchronized to fire through the propeller, and a relatively high performance was achieved with these. The tests were conducted on a standard P-39 which had just come off the production line of the Bell Aircraft Corporation at Buffalo, N.Y.

---oOo---

Ft. Logan to be Turned over to Air Corps

(From Page 7)

(Combat), now stationed at Fort Logan, will move to Vancouver Barracks, Wash., on or about January 15, 1941, where they will be assigned to the Ninth (tactical) Corps.

The already scheduled movement of the 7th Infantry from Vancouver Barracks to Fort Lewis, Washington, on the same date will provide quarters for the 18th Engineers.

---oOo---

Brig. Generals Frank M. Andrews, General Staff Corps, and John F. Curry, U.S. Army, were promoted to Major General, with rank from October 27, 1940.

GRADUATION OF CLASS 40-G

On the morning of November 15, 1940, 219 Flying Cadets marched for the last time as such to the Post Theater, Kelly Field, Texas, to attend their "streamline" graduation exercises. Marching into the theater in single file and in alphabetical order, each Cadet was given an envelope. They had been told not to open this envelope until they were instructed to do so.

Captain Coates, the Secretary of the Advanced Flying School, took charge of the meeting, called the role and administered the oath of office. He then turned the meeting over to Major Davies, Assistant Commandant of the Advanced Flying School, who in turn introduced Colonel H.R. Harmon, the Commandant.

Colonel Harmon told the assembled newly made officers that he was happy to address them on this occasion for several reasons, but one in particular, it being the first time that he had the opportunity to address them as officers. He reminded the Cadets that they were now not only officers of the Army, but the Air Corps as well. He made no apology to any other branch of the service when he said that the graduates of this class were being commissioned in that branch of the service which every man in the room believed to be the finest in morale, spirit, and the most powerful in the defense of the country. His remarks were brief, but contained volumes of food for thought. He closed with the thought that, in achieving the goal to which the class had set itself, each member acquired a commission and a pair of silver wings; "but," continued Colonel Harmon, "you must also assume the responsibility that goes with it and preserve her tradition. I know you will not fail."

Major Davies then called on some of the members of the graduating class for extemperaneous remarks, which were more along thehumorous side. After calling on some six or eight of the newly commissioned officers, the meeting was turned over to Captain Coates, who instructed the class to open their envelopes, in which they found their highly coveted silver wings, commissions, diplomas and orders. After instructing them in filling out some of the forms and turning them in, the class was dismissed.

The new Class, 41-A, consisting of one student officer and 266 Flying Cadets, was scheduled to report at the Advanced Flying School, Kelly Field, Texas, on the morning of November 19, 1940. The names of the members of this class are listed on pages 10 and 11.

"GADGET" GIVES STUDENT FLYERS THE GONG

A novel device for use in primary training of Flying Cadets was invented by Flying Instructor H.G. Nicholson of the Cal-Aero Academy's Training Center at Oxnard, Calif., and built in the shops of the Curtiss-Wright Technical Institute.

Termed a "coordinator," the device reproduces exactly the cockpit of a PT-13 training plane. The stick and foot controls first are locked together, and the Flying Cadet manipulating the control stick is automatically forced to coordinate properly with his feet. After a period of practice in this fashion, the controls are disconnected and the student endeavors to coordinate properly. As long as he does so, nothing happens, but when an error in coordination is made, a bell rings.

The device is being used exclusively at the Oxnard Detachment, and, if it proves as successful as early tests indicate, others will be built for the other Cal-Aero detachments.

---oOo---

BRAZILIAN MISSION VISITS CAL-AERO

The Brazilian Aviation Mission, now in this country to take delivery of a number of training airplanes from the North American plant at Inglewood, Calif., were guests recently of Captain Robert L. Scott, Air Corps, and Cal-Aero officials at the Ontario Training Detachment, when they expressed a desire to observe the primary training of the U.S. Army Flying Cadets.

Arriving in five Brazilian Air Corps planes, the Mission, headed by Major J.S. Macedo, inspected the Detachment and were guests at a luncheon given by Captain Scott, Cal-Aero Academy, and the Ontario Chamber of Commerce.

---oOo---

CIVILIAN FLYERS VISIT ONTARIO, CALIF.

Paying a visit to the new Cal-Aero Primary Training Center at Ontario, Calif., on November 10th, were 123 civilian flyers, who arrived in 75 light planes of every conceivable description.

The tour, arranged by the Los Angeles Chamber of Commerce, marked the first time civilian planes were allowed to land at the new big Training Center.

Coming from practically all Southern California commercial fields, the fliers were entertained at a ham and eggs breakfast, and were shown through the plant.

"It it expected," says the News Letter Correspondent, "that the tour will result in material aid in the recruiting of Flying Cadets."

The following-named Flying Cadets graduated from the Air Corps Advanced Flying School, Kelly Field, Texas, on November 15, 1940:

Watson, Eugene Atkinson	Birmingham, Ala.
Murphree, Clyde Elwyn	Gadsden, Ala.
Keith, Chambliss	Selma, Ala.
Pruitt, Harold Angus	Tuscaloosa, Ala.
Graybeal, James Mathewson	Tucson, Ariz.
West, Robert Harold	Jonesboro, Ark.
Reeves, Henry Herbert	Little Rock, Ark.
Thompson, Wayne Winifred	Little Rock, Ark.
Canada, William Wing	Hot Springs, Ark.
Steves, Clifford Durant	Alhambra, Calif.
Stoebe, Donald Ray	Alta Ioma, Calif.
Robertson, John Clayton	Berkeley, Calif.
Dennis, Larry Denton	Beverly Hills, Calif.
Harris, George Warren, Jr.	Beverly Hills, Calif.
Peery, John Edward, Jr.	Beverly Hills, Calif.
Pritchard, Gilbert Lawrence	Burbank, Calif.
Thomason, Raleigh Medford	Canoga Park, Calif.
Merriam, Wm. Horton	Fullerton, Calif.
Dodson, Robert Slater	Glendale, Calif.
Fast, Richard Harold	Glendale, Calif.
Walton, Robert M.	Hamilton Field, Calif.
Scandrett, Harvey, J.	Hollywood, Calif.
Kolander, Conrad Carl, Jr.	Kingsburg, Calif.
Beaver, Jack Aldred	Los Angeles, Calif.
Briggs, James Kay	Los Angeles, Calif.
Cairns, David Ross	Los Angeles, Calif.
Lawson, Ted William	Los Angeles, Calif.
Lively, Richard Thomas	Los Angeles, Calif.
Mulvehill, John M.	Los Angeles, Calif.
McLeod, Stuart Angus	Los Angeles, Calif.
Shamel, John Wallace, Jr.	Los Angeles, Calif.
Wooley, Preston Bruce	Los Angeles, Calif.
Holsclaw, Gerald Reed West	Los Angeles, Calif.
MacDonald, Daniel Venn West	Los Angeles, Calif.
Mahaffie, Ray Leonard West	Los Angeles, Calif.
Irish, James Robert	Long Beach, Calif.
Davis, Emmett Smith	Lynwood, Calif.
Sheppard, Lloyd Wilson	Mill Valley, Calif.
Haldeman, Horace Glover	Pasadena, Calif.
Humphrey, James White	Pasadena, Calif.
Simeral, Robert Klein	Pixley, Calif.
Titensor, Allen Earle	Santa Ana, Calif.
Dysinger, Leonard S.	San Jose, Calif.
Gray, William Lawson	Santa Barbara, Calif.
Smith, Sydney Thomas	Santa Barbara, Calif.
Gerrard, Robert James	San Francisco, Calif.
Cunningham, Jack Edward	Santa Monica, Calif.
Sogaard, Folmer Jensen	Solvang, Calif.
Royal, Francis R.	Boulder, Colo.
Blehm, Harold E.	Lowry Field, Colo.
Hastey, Raymond Lester	Lowry Field, Colo.
Lass, Edward Clarence	Empire, Colo.
Taylor, Roger Williams	Devon, Colo.
Maull, Harold Vincent	Greenville, Del.
Sharpless, Chas. David.	Wilmington, Del.
Liebhart, Jerald Clifford	Miami, Fla.
Thacker, John Marshall	Miami, Fla.
Colman, Hubert Edwin	St. Petersburg, Fla.
McVey, John Albert	Valparaiso, Fla.
Harrington, Loren Max	Winter Park, Fla.
Bozeman, Wallace Henry	Winter Haven, Fla.
Longino, Dick Randolph, Jr.	Atlanta, Ga.
Williams, Harold Lee	Cordele, Ga.
Norton, Malcolm Eugene	Hartwell, Ga.
Irvin, Ben Screven	Washington, Ga.
Werner, Wesley	Pocatello, Idaho
Murphy, Robert Keith	Twin Falls, Idaho
LeCompte, Robt. Gilmore	Evansville, Ind.
Van Zant, Claude Lewis, Jr.	Indianapolis, Ind.
Anastasio, Edward Paul	Chanute Field, Ill.
Hill, Francis Ackerman	Chanute Field, Ill.
Sampson, Raymond Donavon	Chanute Field, Ill.
Smith, Leslie Albert	Chanute Field, Ill.
Kurek, Adolph	Chicago, Ill.
Weitzenfeld, Richard William	Chicago, Ill.
Wilson, Jack Allen	Hurst, Ill.
Leimbacher, Edgar Glenn	Joliet, Ill.
Beauman, Benj. Franklin	Tunnel Hill, Ill.
Hall, Gordon Edward	Wapella, Ill.
Blaul, Milton Albert, Jr.	Burlington, Iowa
Bush, Lester Clay	Estherville, Iowa
Williams, Charles Edwin	Atchison, Kan.
Conrad, Francis Virgil	Topeka, Kan.
Green, Donald James	Topeka, Kan.
Wertz, Jack W.	Topeka, Kan.
Magruder, Eugene Ross	Kevil, Ky.
Harp, David William, Jr.	Lexington, Ky.
Saad, John Ispiridon	Pikeville, Ky.
Lamont, Neil, Jr.	New Orleans, La.
Asselin, Henry Ovila	Allston, Mass.
Karsokas, Benjamin A.	Methuen, Mass.
Wyman, Frank Melvin, Jr.	Stoneham, Mass.
Vacca, Gerald Robert	Watertown, Mass.
Mack, Garritt Wm.	Birmingham, Mich.
Leggat, George Walter	Detroit, Mich.
Bowe, Hugh Heiby, Jr.	Mt. Clemens, Mich.
Grant, Robert Frederick	Muskegon, Mich.
Lombardy, Bennie	Duluth, Minn.
Caldwell, Ralph Elbert	Duluth, Minn.
Berge, Ralph I.	Erskine, Minn.
Gowdy, Francis B.	Little Fork, Minn.
Harris, Clifford Fredric	Minneapolis, Minn.
Crawford, Delson Eugene	Minneapolis, Minn.
Horner, Richard Elmer	Wrenshall, Minn
Shields, John Robert	Greenville, Miss.
Bennett, James Whitt, Jr.	Bloomfield, Mo.
Faurot, Robert Lloyd	Columbia, Mo.
Schieber, Hudson Matthew	Clayton, Mo.
Holbrook, James Francis	Maryville, Mo.
Whiteman, George Allison	Sedalia, Mo.
Wittrock, Howard Henry	St. Louis, Mo.
Ingham, James Milton	University City, Mo.
Choate, Robert Ingraham	Miles City, Mont.
Robberson, Floyd Ronald	Rosebud, Mont.
Keiser, Glen Vernon	Reno, Nev.
Saltsman, Ralph Henry, Jr.	So. Orange, N.J.
Barrere, Robert A.	Woodridge, N.J.
Benjovsky, Theodore D., Jr.	Central, New Mex.
Carleton, Bert Maurice	Silver City, New Mex.
O'Keefe, Timothy Francis, Jr.	Brooklyn, N.Y.
Falkner, Verne Vincent	Burdett, N.Y.
Kelly, Edw. Thomas	Dansville, N.Y.
Berg, Leland Alfred	Elmhurst, N.Y.
Snaith, William Gardner	Fort Hamilton, N.Y.
Femenella, John Carmine	Great Kills, N.Y.
Robb, Harry Wilson	Jamaica, Long Island, N.Y.
Mosher, Rowland Orson	Kirkville, N.Y.
Ramputi, Frederick Rinaldi	Newburgh, N.Y.
Chenoweth, Lee Andrew	Peekskill, N.Y.
Adams, Chas. Frederick	Pine Plains, N.Y.

Phillips, Arnold Thielens	White Plains, N.Y.
Edney, James Sidney	Chapel Hill, N.C.
Small, James Eugene	Concord, N.C.
Furr, Grover Carr, Jr.	Raleigh, N.C.
Bridgers, Walter Moore	Rowland, N.C.
Shaw, Robert A.	Fargo, N.D.
Cathcart, William S.	Fargo, N.D.
McKown, Bernard Clay	Akron, Ohio
Schwane, Henry H.	Cincinnati, Ohio
Craig, Franklin Jr.	Columbus, Ohio
Linn, John Robert	Columbus, Ohio
Davis, John Pharon	Norwood, Ohio
Spielan, Richard S.	South Euclid, Ohio
Kenny, Thomas F., Jr.	Youngstown, Ohio
Cason, Wm. Arthur, Jr.	Lindsay, Okla.
Aliey, Joseph White	Oklahoma City, Okla.
Bell, George Vincent	Prague, Okla.
Hoke, Roy T.	Stillwater, Okla.
Durham, Sam Bert	Stillwater, Okla.
Eck, Anthony Ignatious	Waukomis, Okla.
Shoop, Richard Raymond	Corry, Pa.
Schnebly, Thomas Hughes	Colver, Pa.
Comber, William E.	Philadelphia, Pa.
Gaygan, Jack A.	Philadelphia, Pa.
Read, Elkins, Jr.	W. Pittston, Pa.
Birch, Hartzell Russell, Jr.	Kingston, R.I.
Hiott, Erskine Duval	Columbia, S.C.
Lightsey, Ralph Leon, Jr.	Fairfax, S.C.
Thomas, Archie Clifford	Hampton, S.C.
Snipes, Gilmer Lee	Seneca, S.C.
Mears, James Franklin, Jr.	Varnville, S.C.
Pulfrey, Robert E.	Amherst, S.Dak.
Bartling, George Elmer	Brookings, S.Dak.
Criz, Albert	Sisseton, S.Dak.
DeWeese, Theodore D.	Cleveland, Tenn.
Grubb, Wm. Franklin	Knoxville, Tenn.
Spivey, Paulette	Atlanta, Texas
Moore, Harold Elwood	Austin, Texas
LaRoche, John Julius	Austin, Texas
Francks, Church Barry, Jr.	Brady, Texas
Gibson, Norris Wilbur	Cleburne, Texas
Gilcrease, James Robert	Corsicana, Texas
Haley, Albert Lawrence	Dallas, Texas
Williams, Calvin Luther, Jr.	El Paso, Texas
Carswell, Horace Seaver, Jr.	Ft. Worth, Texas
Carey, John Bernard, Jr.	Kelly Field, Texas
Delashaw, Robert Lee	Kelly Field, Texas
Countz, Charles W.	Los Fresnos, Texas
Webb, Roy Abner, Jr.	Pampa, Texas
Beach, Elmer Clare, Jr.	Pearsall, Texas
Flynn, Eugene L.	Randolph Field, Texas
Patterson, Ralph Raymond	Randolph Field, Texas
Parrett, Charles Meredith	San Antonio, Texas
Snider, Marion Carr	San Antonio, Texas
Riha, Amos F.	Taylor, Texas
Anderson, Boyce Clayton	Timpson, Texas
Turner, Ollen	Whon, Texas
Griffin, Richard Varney	Garland, Utah
Williams, Dwight James	Layton, Utah
Farrell, Robert Howe	Murray, Utah
Christensen, N. C. Jr.	Salt Lake City, Utah
Hardy, John K., Jr.	Salt Lake City, Utah
Neeley, Richard Cox	Salt Lake City, Utah
Taylor, Wm. Vaughn	Salt Lake City, Utah
Walker, Wm. Herald	Salt Lake City, Utah
Hughes, Phil	Spanish Fork, Utah
Williams, Walden	Spanish Fork, Utah
Johnson, Austin W.	Syracuse, Utah
Crandall, Thomas Oakey	Tooele, Utah
Wooley, Cloyd	Vernal, Utah
Swain, Roger Lawson, Jr.	Danville, Va.
Jemmott, Herbert K.B.	Newport News, Va.
Van Patten, Perry H.	Cheney, Wash.
Leen, Gerald Adrian	Everson, Wash.
Nolimeyer, Edw. Max	Peshastin, Wash.
Wegner, Robt. Edward	Pullman, Wash.
Luschen, Frank Leslie	Seattle, Wash.
Kingen, Elmer Fred	Spokane, Wash.
Cotter, Harold Eugene	Walla Walla, Wash.
Egan, John Clarence	Manitowoc, Wisc.
Hergert, Thomas Malcolm	Milwaukee, Wisc.
Rogers, Floyd Vars	Milwaukee, Wisc.
Cleven, Gale Winston	Bairoil, Wyo.
Sawyer, Jerome Robert	Schofield Bks., T.H.
Bridges, Robert Sheldon	Wahiawa, Oahu, T.H.
Parra, Adolfo J.	San Juan, P.R.

It will be noted from the foregoing list of Class 40-G graduates that, as is almost always the case, California leads all the States of the Union in the matter of student representation at the Training Center. With a total of 39 graduates haling from that State, she is followed by Texas, always her closest rival, with 21 students. Utah is next with 13 students, followed by New York with 12; Illinois, 10; Minnesota, Missouri, Ohio and Washington with 7 each; Florida and Oklahoma, 6 each; and Colorado, Pennsylvania and South Carolina, 5 each. None of the other States represented in the graduating class is credited with more than four students each.

---oOo---

GOOD PARACHUTE JUMPERS DIE IN BED (CONTINUED FROM PAGE 4)

high altitudes. There are no evident reactions to the body other than temporary loss of hearing until the chute actually opens. Nor is there a feeling of dizziness, but rather that of suspension, without the slightest indication of falling until you realize your position with respect to that of the earth. "Unless one is familiar with the operation and function of parachutes, he should not under any circumstances attempt a delayed opening drop at anytime. I might add that the greatest of all dangers encountered in chute jumping is steerage of the parachute by slipping; that is, closing the canopy by pulling on the shroud-lines. One might pull them too far and if that happens at very low altitude, the chute will collapse and plummet to earth, killing or very seriously maiming the jumper," Colwell said.

Yes, a jumper can literally 'see stars', according to Colwell. The parachute opens with a recoil shock of 5000 pounds and if caught with head down, it is very likely that you will experience the phenomena of great brilliancy, "seeing more stars than just one!"

---oOo---

With the arrival of the 23d and 32d Pursuit Squadrons from Brooks Field, Texas, on November 17th, the 36th Pursuit Group will be consolidated at Langley Field for the first time. Added to the excitement of their arrival were the assignment of new Reserve officers for administrative duties and the attachment of many men from the 25th Bomb. Group, now in Puerto Rico.

MANEUVERS BY 25TH BOMBARDMENT SQUADRON

The 25th Bombardment Squadron, France Field, Panama Canal Zone, participated in several Group maneuvers, in addition to carrying on practice and record bombing and instrument flying. Record bombing qualified Sergeants Bishop and Evans as expert bombardiers at 4,000 feet, the scores being 76 and 58, respectively. Practice bombing was then conducted at a higher altitude with excellent results.

Recent Group maneuvers were conducted as a demonstration for observance by high ranking officers from South America. One night demonstration consisted of a flight of nine B-18's which dropped flares over Albrook Field prior to a "night attack" of that station. The lighting effect of flares dropped from airplanes was successful, after which ground searching crews were also successful in spotting the Bombardment planes. On the following morning, the nine B-18's took off with one-hundred-pound demolition bombs in each ship. While the visiting South American officers looked on from nearby, but not too nearby, the airplanes of the 6th Bombardment Group flew over a target two miles off shore in formation and dropped the bombs in train. The target was supposed to represent a munitions plant. The mission of "destruction" was accomplished, and the South American officers were very much impressed.

---oOo---

SIGNAL AVIATION COMPANIES IN PANAMA

Since the recent activation of the 306th and 325th Signal Aviation Companies, the 13th Signal Platoon and the 52nd Signal Maintenance Company (Aviation), under the command of Captain A.J. Mandelbaum, 19th Wing Signal Officer at Albrook Field, these units have been materially increased by the arrival of personnel from the States.

First Lieut. Howell E. Roberts, Base Signal Officer at Albrook Field, commands the 13th Signal Platoon, and 2nd Lieut. Kenneth Gonseth a detachment of the 306th Signal Maintenance Company (Aviation), at Rio Hato. The 325th Signal Aviation Company is scheduled to move to Howard Field when air operations begin.

These units have become an integral part of the Air Corps Base system by assuming the administration, operation and maintenance of all Signal ground equipment serving the Air Corps organizations in the 19th Wing. These comprise such activities as administrative radio, post telephone system, inter-post teletype circuits, Signal equipment repair shops, and storage rooms, together with a complete accountancy system for checking the disposition of all equipment in the hands of the flying units.

In view of the technical nature of their duties, a high ratio of the personnel of these units have been specially trained in Service Schools for their specific duties. Such Army schools in the States have been materially expanded within recent months, and their output of specialists has been further augmented by utilizing the facilities of various civilian schools already equipped for similar instruction. The degree of proficiency acquired by these men in such a comparatively short time is surprising, even though these new soldiers are carefully selected according to their education, inclination, and ability for the specialized work they are to follow in the Army.

---oOo---

LOWRY FIELD GRADUATES BOMBING PUPILS

Eighteen young men from 15 States were graduated on November 2, 1940, as the first Flying Cadet Bombardier Instructors at Lowry Field. At the graduation ceremonies, these Cadets heard speeches by Lieut. Colonel Early E.W. Duncan, new Commanding Officer of Lowry Field; Captain Leon R. Brownfield, Commandant of Cadets; Captain Frederick L. Anderson, Jr., Director of the Bombardier Instructors' School, and various other members of the officer faculty.

The Cadets attended the School for sixteen weeks. A second class of sixty Cadets was undergoing instruction at the time of the graduation of the first class, and a third class of the same size was scheduled to start on November 12th.

All of the Cadets graduating on November 2nd were temporarily assigned to duty at Lowry Field. They are:

Gilbert D. Greer, St. Johns, Ariz.
Edward F. Sustrick, Denver, Colo.
Walter D. Snyder,Jr., New London,Conn.
Royal F. Cato, Sacramento, Calif.
Wm. L. Richards, Winter Park, Fla.
Wallace T. McGill, Boise, Idaho.
Vernon E. Waildin, Hoisington, Kans.
Dwight E. Bonin, Minneapolis, Minn.
Chester A. Peterson, Devils Lake,N.D.
Harve N. Johnson, Fallis, Okla.
James H. Murphy, Pittsburgh, Pa.
Adam F. Zalonka, Pottsville, Pa.
Henry L. Law, Jr., Hartsville, S.C.
Everett N. Woods, Johnson City, Tenn.
Everett Davis, Eastland, Texas
William M. Crawford, Narasota, Texas
Charles R. Floyd, Jr., Roanoke, Va.

---oOo---

THE AIR CORPS ENGINEERING SCHOOL

By Capt. Alfred R. Maxwell, A.C., Asst. Commandant

Welcome alike to alumni and hopeful applicants is the news that the Air Corps Engineering School at Wright Field is functioning again. Closed for nearly seventeen months, due to the demands of the expansion program, the school was reopened on August 1, 1940, for the regular 12 months' course.

Brigadier General O.P. Echols* is the Commandant, and Captain A. R. Maxwell the Assistant Commandant. We are happy to say that the key personnel are back again - Mr. Ezra Kotcher as Professor, and Miss Ruth K. Clark as Secretary. An addition to the faculty is scheduled for the near future, an Assistant Professor, who will take over the instruction in aircraft engine design and allied theoretical and practical subjects.

The School was limited to six students this year, all former members of the Materiel Division. They are: 1st Lieuts. Edward G. Kiehle from Duncan Field; Ralph L. Wassell, Middletown Air Depot; Evart W. Hedlund and Harold M. Keeffe, Fairfield Air Depot, and Elmer E. McKesson and Bernard A. Schriever, Wright Field. This is probably the most homogeneous class the School has ever had. All the students are of the same grade, and approximately of the same age, service, education and professional experience. All were formerly Reserve officers, and most of them have seen service with the air lines.

In addition to the students at the Engineering School, the following officers are pursuing graduate courses in aeronautical subjects under Air Corps Engineering School supervision: Captains Howard M. McCoy, Carl F. Damberg and 1st Lieut. Charles H. Terhune, Jr., at California Institute of Technology; and 1st Lieuts. Marvin C. Demler, Clarence A. Neely and Harold E. Watson at the University of Michigan. Captains McCoy and Damberg are graduates of the Air Corps Engineering School, and the former is doing his second tour at the California Institute of Technology.

As with many other Air Corps organizations, the program for the year 1941-42 is impossible to predict at this time. It is hoped that the School may continue to function, and that increased attendance will be possible both at the Engineering School and at civilian graduate schools. In any event, all officers interested in either detail should submit their applications without delay, in accordance with Army Regulations 350-550.

For the information of those not familiar with requirements, the following is submitted: All applicants are sent a questionnaire from which their eligibility is determined. This can be obtained from the Engineering School previous to applying, or will be sent from the Office of the Chief of the Air Corps upon receipt of letter of application. Applicants should be graduates of the United States Military Academy or have a degree in engineering from a school of recognized standing. The Faculty Board reviews the questionnaire and pertinent recommendations, and forwards its recommendations in each case to the Chief of the Air Corps. Once having been established on this eligible list, an officer's chances of being assigned as a student depend almost entirely upon his military availability, travel funds, etc. Junior officers should not assume that their inexperience will impair their chances of being assigned, since it has happened that the entire list was exhausted by non-availability for various reasons.

Due to the large demand for trained officers for the engineering and procurement phases of the Materiel Division, most of the former graduates of the School are now engaged in such work. Hence a student can usually expect that he is committing himself to an indefinite period of engineering work. This aspect should be considered both by the applicant and by his senior officers.

As the Air Corps expands, applications to the School become more and more impersonal. In order that the maximum benefit may accrue both to the service and to the individual, the Faculty Board would welcome carefully weighed recommendations from senior officers. These could either be in the form of indorsements to the application or letters direct to the Commandant. It is also hoped that senior officers will encourage promising young officers to consider such engineering careers.

The Assistant Commandant will be glad to correspond directly with any interested officers in the way of furnishing further information and available literature or suggesting lines of study.

---oOo---

Announcement was made in War Department Special Orders recently of the temporary appointment of Lieut. Colonel Alfred J. Lyon to the grade of Colonel.

V-8651, A.C.

*General Echols was recently relieved from duty at Wright Field and assigned to duty in the Office of the Chief of the Air Corps, Washington, D.C.

NEW AIRPLANES RECEIVED AT WRIGHT FIELD

A new model of the famous Flying Fortress, bearing the designation of B-17C, was recently delivered at Wright Field, Dayton, Ohio. This plane is similar in all respects to its forebears with the exception that, instead of blisters, flat turrets increase streamline effects, and the engines are higher powered.

Expected shortly at Wright Field are the A-20A (Douglas) Light Bomber and the YP-43 (Republic) Pursuit. The A-20A, the first Light Bombardment airplane under the 5500-plane expansion program, is designed to combine the best features of the Attack airplane and a light, fast Bomber. A mid-wing monoplane of all-metal construction, it is powered with two Wright 14-cylinder radial engines and 3-bladed propellers. A crew of three man the airplane, which is equipped with two-way radio. The wing span is 61 feet.

The YP-43 airplane is an all-metal, low-wing, single-place Pursuit type, and is an improvement of the Republic P-35 with which several Pursuit Squadrons of the GHQ Air Force are equipped. The YP-43 has a wing span of 36 feet, and is equipped with one Pratt and Whitney 14-cylinder engine. The gross weight is approximately 6900 pounds.

---oOo---

FIRST UNIT OF 9TH BOMBARDMENT GROUP ARRIVES IN PANAMA.

The U.S. Army Transport AMERICAN LEGION docked in Balboa early on the morning of November 13th with such portions of the 9th Bombardment Group as are not proceeding later by air from their former base at Mitchel Field, N.Y. This contingent arrived under the command of Major Milton A. Stone, Air Reserve, and consisted of 45 officers and 641 enlisted men. The air echelon of approximately 20 Bombers, commanded by Colonel Ross Cole, A.C., as Group commander, will bring an additional 50 officers and 66 men.

Naturally, all hands were full of eagerness to catch the first glimpses of their new surroundings, and nearby Albrook Field was the mecca for such impromptu inspection parties as could be momentarily spared from unloading activities on the transport.

When sufficient baggage had been put ashore, a truck convoy was headed for their destination at the newly constructed base at Rio Hato. Most of the organization was transported that same day - no small feat over some 65 miles of congested highway.

The new arrivals were greeted at Rio Hato by members of the 37th Pursuit Group, commanded by Major Milo Clark, A.C., who has been diligently engaged during the past month in hastily erecting the buildings which are to house temporarily the 9th Group until their eventual occupation of Howard Field, now under construction.

As the 37th Group construction party was evacuating the camp for a return to their permanent station at Albrook Field, they endeavored to make the new arrivals from Long Island feel thoroughly at home by such details as erecting street signs, appropriately labeled "Broadway," "42nd Street," "Times Square," etc.

---oOo---

23RD AIR BASE GROUP MEN SAIL FOR ALASKA

Recently departing from March Field, Calif., enroute to station in Alaska, were one officer and 17 enlisted men of the 23rd Air Base Group (Reinforced).

First Lieut. John C. Bowen, Tech. Sgts. Dominick W. Gillespie, Delevan Wolters, Staff Sgts. Gervus Cummings, Marcus H. Baldwin, Sgt. Leslie S. Hubbard, Cpl. Walter Tauche, Pvts. 1st Cl. Perry J. Thompson and Warren C. Tarkington were sent to Fort Mason, Calif., and sailed aboard the Army Transport ST. MIHIEL on November 19th for Seward, Alaska, from which point they will travel by rail to Anchorage and will be stationed at Elmendorf Field.

Also sailing aboard the ST. MIHIEL were Staff Sgts. Carl Kotler, Jess P. Wilson, Montelle Hatchett, Sgt. Joseph R. Prochaska, Cpl. Leslie A. Tenold, Pvts. 1st Cl. Charles W. Nall, Marcus O. Lightfoot and Norban Taylor. The men will travel from Seward to Fairbanks and will be stationed at Ladd Field.

---oOo---

GUNNERY EXERCISES AT GOLETA, CALIF.

The activities of the 34th Bombardment Squadron, McChord Field, Wash., during October and November were considerably increased incident to making preparations for their part in the 17th Group gunnery exercises which were scheduled to begin on November 7th. Due to unavoidable circumstances, however, the show failed to get under way at the scheduled time. The postponement turned out to be temporary, and the Group was expected to leave for the Santa Barbara Airport at Goleta, Calif., about the middle of November.

These gunnery exercises are unique in that they are the first attempt on the part of the Bombardment Group to establish a base of operations entirely independent of any outside assistance in

the way of transportation of equipment and supplies. All shipments were made in tactical airplanes in several flights wherein all equipment, supplies, armament and food were transported in either B-18A's or B-23's.

The 34th Squadron has had a starring role in these trips and, says the News Letter Correspondent, "it is expected that the test firing in the new B-23's will be enlightening to all concerned. Needless to say, the eyes of the Materiel Division, as well as the 1st Wing, are focused on the mission at Goleta. The success of this operation is dependent on the fullest cooperation from the squadrons involved, and you can bet your last dollar the 34th is raring to go and is simply waiting for the starting gun."

---oOo---

INSIGNIA FOR 89TH RECON. SQUADRON

According to the News Letter Correspondent, it looks as if the 89th Reconnaissance Squadron, McChord Field, Wash., will finally acquire an official insignia. After a delay of several months while waiting for the Squadron history to be furnished, a board of officers was appointed to designate an insignia. The final consensus of opinion seemed to be in favor of an insignia conceived by Captain F.R. Terrell and designed by Lieut. C.R. Greening.

The design consists of a circular background with an abstract of the Winged Helmet of Mercury inclosed. The colors, however, have not as yet been fully decided upon, but a dark blue background with an orange gold helmet and wings having a silver band on the helmet and silver feathers on the wings seems to be favored.

---oOo---

MASS BOMBING AT MacDILL FIELD

The 52nd Bombardment Squadron recently utilized 9 planes of the 29th Bombardment Group to perform a mass bombing mission on the MacDill Field bombing range. Following this mission, eight of the ships were dispatched on formation navigation flight to Atlanta, Ga. The ships proceeded individually to three designated initial points, whence they formed into elements of three and flew to the Squadron assembly point at Valdosta, Ga., continuing therefrom to Atlanta, where an overnight stop was made. The ships returned to Drew Field, Tampa, Fla., the next morning in formation, via Fort Benning, Ga. Near Cross City, Fla., the ship flown by Captain Robinson, Commanding Officer of the 52nd Squadron, developed engine trouble, necessitating a forced landing at Gainesville, Fla., with the left propeller feathered. Other than this incident, the flight proved uneventful and provided excellent tactical experience for the pilots and navigators.

---oOo---

CHANUTE FIELD AND THE A.G.O. FORM 20

By the News Letter Correspondent

It all practically began at Chanute Field back in June, 1938. Major Oscar L. Rogers, then personnel officer of Chanute Field, began to ponder over the problem of classifying enlisted men of that station into categories which would make the most practical use of their former trades and education.

Although it is unlikely that they have ever heard of Major Rogers, conscriptees coming into the service for one year of intensified training, in order to bolster the scheme of National Defense, will be classified under a system based largely upon the original efforts of this officer.

Major Rogers began experimenting and bringing to light the fruits of his efforts with a small classification card which measured only 5 x 8 inches, with a supplementary card of still smaller dimensions. He early realized that the following information on each and every enlisted man was imperative to his system if it were to succeed: (a) age; (b) marital status; (c) civilian education; (d) technical education; (e) military education, particularly important in the case of men with former service; (f) lastly, a complete record of the jobs on which the man was working.

At first, evident flaws were detected and the cards were revised several times; finally, the Major believed he had approached perfection, and no changes were found necessary in two years' use. A board of officers from the General Staff, Washington, was sent to Chanute Field to make a detailed study of the trade test and classification of enlisted men, and it was from the original efforts of this Chanute Field officer that the A.G.O. Form 20, now in standard use throughout the Army, was devised.

Major Rogers first put his idea to a practical test during the summer months of 1939, when members of a group of incoming men - numbering over 1500 over a period of six months, many with former service in other branches - were classified and assigned to various tasks about Chanute Field on the strength of the final analysis of their respective

(Continued on Page 17)

McChord Field, Wash.

The War Department announced under date of November 20, 1940, that authority was granted for the construction of additional temporary buildings and facilities at McChord Field, near Tacoma, Washington, and that a total sum of $587,592 was set aside for this purpose.

The construction program will include 25 enlisted men's barracks, 6 day rooms, officers' quarters, officers' mess, two enlisted men's messes, 6 supply rooms, 3 administration buildings, an infirmary, a post exchange, a recreation building, a theater, a warehouse, 4 bombsight storage buildings, a Link Trainer building, a school building and necessary utilities.

Units to occupy the new buildings will be the 12th Group Headquarters and Headquarters Squadron, which comprises the 81st, 82nd and 83rd (Light Bombardment) Squadrons; 19th Reconnaissance Squadron, 44th Air Base, an Antiaircraft Tow Target Detachment, and Weather, Communication and other special troops.

McClellan Field, Calif.

The construction of temporary buildings and other facilities at McClellan Field, Sacramento Air Depot, Calif., was authorized by the War Department on November 15, 1940, the outlay involved being $147,970.

Air Corps units to occupy the new facilities are Headquarters of the Sacramento Air Depot; 62nd Transport Squadron, which includes Group Headquarters and Headquarters Squadron, 4th Transport Squadron and 7th Transport Squadron; and Weather and Communications personnel. The necessary Quartermaster, Signal, Ordnance, Medical, Chemical Warfare Service and Finance personnel will also be stationed there.

Four barracks, two day rooms and a cafeteria style mess will be constructed for enlisted men, while other new facilities will include an officers' mess building, two bachelor officers' quarters, a supply room (organization), a theater and a commissary warehouse.

Manchester, N.H.

An announcement by the War Department, under date of November 25, 1940, is to the effect that authority has been granted for the construction of temporary buildings and facilities at the Manchester, N.H. Airport at a cost of $1,606,550.

The buildings to be constructed are the necessary administration, housing, and technical structures required for occupancy by units and personnel of the following Air Corps and other troops:

45th Bombardment Group (L), consisting of Hqrs. and Hqrs. Squadron, the 78th, 79th and 80th Bombardment Squadrons; 17th Reconnaissance Squadron; 33rd Air Base Group; a Weather Squadron and Communications Squadron; Mech. and Reserve Airplane Detachment; and Flights A, B and C, of the First Target Squadron are to be stationed at this new field. There will also be Quartermaster, Signal, Ordnance, Medical, Chemical Warfare Service, Finance troops, and attached Chaplain. The total number of Air Corps troops will be approximately 1900 officers and enlisted men; other troops, approximately 370 officers and enlisted men.

Buildings to be constructed for administration and housing purposes will consist of the following:

35 63-man capacity standard type barbacks,
9 Day Rooms,
3 Standard type enlisted men's mess buildings, 210-man capacity,
2 enlisted men's mess buildings, 250-man capacity,
1 Officers' Mess,
1 Cafeteria,
4 Officers' Quarters,
9 Squadron Supply Rooms,
5 Squadron Administration Buildings,
1 Administration Building (Group),
1 Administration Building (Air Base),
1 Administration Building (Misc.)
1 Fire Station, to accommodate three pieces of apparatus and necessary crew.
1 Guard House,
1 100-bed Hospital
1 Infirmary.
1 Flight Surgeon's Unit,
1 Post Exchange,
1 Recreation Building,
1 Communication Building,
1 Theater accommodating about 370 people,

Quartermaster installations will include:

2 Insulated warehouses of about 9200 square feet area,
1 Gasoline Storage Plant,
1 Motor Repair Shop,
1 Quartermaster Utility Shop.

Technical Buildings:

5 Squadron Operations Buildings,
1 Group Operations Building,
1 Air Base Operations Building,
5 Storage Structures,
1 Link Trainer Building,
1 Parachute Building,
1 School Building,
1 Air Corps Hangar Shop.

Radio structures will include one Range Building and one Station Building.

In addition to the above, there will

be Ordnance magazines necessary for an Air Corps unit of this size, and two additional warehouses for Air Corps and Ordnance and Signal equipment.

Parking area will be equipped with night lighting, and the Air Corps area will be surrounded by an 8-foot steel fence.

Contracts for this construction have not yet been awarded.

Scott Field, Ill.

The $1,700,000 building construction program now in progress at Scott Field, Belleville, Ill., is nearing completion. This project, scheduled to be completed by December 20, 1940, will provide 160 new frame buildings to house, feed, and furnish space for the administrative duties of 8,000 officers and enlisted men. More than 15 miles of sewerage and water lines are being laid.

The buildings being erected include a mess hall, 90 barracks, 22 recreation rooms, 12 administration buildings, 27 warehouses, 2 post exchanges, a fire station, 2 infirmaries, a bachelor officers' quarters to house 40, and a guardhouse. They are to be an integral part of the Air Corps radio communications school.

The new mess hall will seat 6,000 men at one time, and is the second largest Army mess hall in the country. The contract for the work was released to the Evans Construction Company, Springfield, Ill., for the sum of $209,000. This building is being built in the center of the new cantonment area.

Bids for a central boiler plant will be opened on November 26, 1940. This building must be completed within 90 days after the contract has been awarded.

---oOo---

TESTS OF NEW TYPES OF PLANES

Recent War Department announcements convey the information that three new types of airplanes are now undergoing tests.

The B-25 Medium Bombardment airplane is undergoing inspection and testing by Air Corps officers and engineers at the plant of the North American Aviation, Inc., at Inglewood, Calif.

The B-25 is an all-metal monoplane of conventional design with an internally braced mid-wing. The landing gear is fully retractable and is of tricycle design. It is powered with two 14-cylinder two-row radial air cooled engines. Propellers are of the controllable-pitch, constant-speed, full-feathering type. The airplane carries a crew of five and full navigation and radio equipment.

Preliminary ground tests are being conducted on the Martin B-26 at the Glenn L. Martin plant, Baltimore, Md., with flight tests being scheduled for the near future.

The B-26 is a new type Medium Bomber of mid-wing monoplane design. Construction is all-metal monocoque. The landing gear is a retractable tricycle type.

The power plants consist of two Pratt and Whitney 18-cylinder engines, rated at 1850 horsepower. The propellers are Curtiss automatic electric, four-bladed, full feathering, with diameters of 13 feet, 6 inches.

The gross weight of the plane is 26,625 pounds. Provisions are available for a crew of five.

Upon completion of the preliminary ground and flight tests at the Martin plant, the plane will be flown to Dayton, Ohio, where it will receive complete acceptance tests in the hands of Air Corps test pilots.

The PT-20A (Primary Training) airplane, manufactured by the Ryan Aeronautical Company, San Diego, Calif., is undergoing test by the Army Air Corps at Wright Field, Dayton, Ohio.

This airplane is similar in all respects to the PT-20, except for a change of engines. The PT-20A mounts a Kinner, 5-cylinder radial engine, developing 125 horsepower at 1925 r.p.m. The PT-20 was equipped with a Menasco engine. In making this change, the exterior appearance of the nose of the airplane is considerably different.

---oOo---

A.G.O. FORM 20 (From Page 15)

classification cards.

Needless to say, the classification card system has proved most practical, and numerous cases might be cited showing where these men, assigned to departments well over a year ago, are still working at the same duty. Sergeant G.T. Widener, because his cards indicated promise as a clerk, was assigned to duty with the classification department which was then under the direction of Major Rogers. At present, this man is chief interviewer with the Chanute Field Classification Board - all because Major Rogers believed classification, when properly accomplished, was the most efficient method in the world.

---oOo---

Master Sergeant Walter H. Smith, 6th Bombardment Squadron, GHQ Air Force, was placed on the retired list at MacDill Field, Tampa, Fla., November 30, 1940.

"HEADACHES OF A STAGE COMMANDER"
By the Randolph Field Correspondent

To the seasoned pilot, the command, "We will take off and land on the mat," means very little. Now, that is as it should be, but when the mat is a warm-up apron some 100 by 2,000 feet, and that apron is directly in front of seven hangars, with a sixteen-mile-an-hour whipping from behind each hangar, the problem of getting some fifty odd airplanes into the air and landing them each sixty minutes is a difficult one.

Recently, heavy downpours drenched Randolph Field day after day, and the flights fell far behind the flying schedule. Finally, the stage and flight commanders got heads together to determine a method of flying off the warm-up apron that would allow a maximum of flying hours and, at the same time, insure a maximum of safety. The idea of flying off the warm-up apron is not a new one at Randolph Field, but successfully to fly some fifty odd airplanes per hour off the narrow apron is new. This was accomplished without an accident or a near accident of any kind.

Supervisory personnel were stationed in the control tower to use the radio or the red spot light if the occasion should arise. Four flights normally operate at one time. The schedule permits each flight fifteen minutes in which to land its airplanes, change students, and take off again. Most flights were operating between 12 and 14 airplanes. To maintain the required schedule, a constant interval of approximately 30 seconds between airplanes throughout the four hours of flying would be required. The experienced pilot knows that to maintain such a schedule requires the timing accuracy of a tactical mission carried out with precision. This schedule was maintained. In fact, one flight cut its time to less than 12 minutes for take-offs and landings. To do this, flights rendezvoused at the down wind end of the mat five minutes before their scheduled landing time. Then, as the clock showed that their time was on, they peeled off one at a time and proceeded to land. The airplanes landed on the outer edge of the mat, taxied back to the inside edge, circled their flight's hangar, picked up the next students and awaited the moment when the mat would be all clear for take-off.

Have you ever landed behind an obstruction or building that blankets a strong cross wind? If you haven't, then you have missed one of those rare sensations that are commonly classified as an experience. You glide in for the landing, crabbing into the wind to hold your flight path. Suddenly you are behind the hangar and you no longer have a drift - the air is calm. Just as you are about to set it down, you emerge from behind the hangar and a heavy gust of wind hits the airplane. The wind swings up, but through luck you don't get the wing tip. Then you are behind another hangar and all is quiet again. Well, this goes on and on until finally you are down and then all you have to think about is keeping her straight on a narrow apron with another airplane taxying toward you to the inside. Try it sometime for yourself.

It's all in the day's work and "A" Stage feels quite proud that its instructors who, with few exceptions, were students three months ago, can perform in such a creditable manner.

---oOo---

STATISTICS ON CLASSES AT RANDOLPH FIELD

Approximately 266 Flying Cadets of Class 41-A were scheduled to report to the Advanced Flying School at Kelly Field, Texas, on November 19, 1940.

The Class of 41-B totals 329 Flying Cadets, and it is expected that the Class of 41-C, arriving November 26th and 27th, will number approximately 425 Flying Cadets.

The following comparative percentages are submitted for information.

	Reserve Officers	Thomason Act Officers	One University Degree	Two University Degrees	Took Mental Examination	Average Age
40-E	3.9	.43	17.4	.43	4.3	22.9
40-F	7.5	2.37	21.34	--	4.35	22.6
40-G	2.9	.41	22.0	--	17.0	22.9
40-H	5.46	.38	25.2	1.03	5.46	22.7
41-A	13.1	1.03	43.8	.34	3.8	22.3
41-B	14.4	1.48	35.1	--	3.43	22.6

Flying has been greatly accelerated due to time lost on account of inclement weather. "It is estimated," says the News Letter Correspondent, "that

(Continued on Page 19)

ACTIVITIES IN THE NORTH COUNTRY

With the establishment of Ladd Field, Fairbanks, Alaska, the Air Corps has penetrated into the far north and sub-zero climatic conditions.

At the present time the construction on the field is not finished. The married officers' quarters and the married noncommissioned officers' quarters are expected to be completed before March first, next. The bachelor officers' quarters, hangar, hospital, barracks and other buildings will not be completed until late next spring. "We are thankful," says the News Letter Correspondent, "that the central heating and power plant has been completed."

The 71 enlisted men now stationed at Ladd Field are from the 2nd Materiel Squadron, 23rd Air Base Group; and detachments of the 36th Bombardment Squadron, 34th Pursuit Squadron, 1st Weather Squadron and 3rd Communications Squadron. In addition to the Air Corps troops, there are 118 Infantry troops, comprising Company L, 4th Infantry, commanded by Captain H.A. Murphy. Both the Air Corps and Infantry troops are quartered in temporary barracks, which are well insulated and heated but slightly overcrowded. It is expected that this overcrowded condition will be remedied with the completion of the married noncommissioned officers' quarters. Both the officers and enlisted men in the first three grades are impatiently awaiting the completion of their quarters so that they may bring their wives and families to Alaska.

Flying is being carried on at full speed with two B-17B's, two P-37's and one O-38. Delivery is expected soon on two O-49's, and the men are anxious to have their first look at the new type of Observation plane.

Most of the flying operations to date have been familiarization flights which have covered the major portion of the Territory of Alaska. "From all we have seen," says the News Letter Correspondent, "the Territory is mountainous from one end to the other, except the area around Point Barrow on the Arctic Ocean. We have been very fortunate in having excellent flying weather and moderate temperatures."

A flight in a B-17 from Ladd Field to McChord Field, Wash., was made by Major Gaffney, Captain Freeman, Lieuts. Hebert and Marks, with an enlisted crew comprising Tech. Sgt. Gilreath, Staff Sgts. Johnson, Hurley and Cpl. LaTorra. The plane left Ladd Field on October 18th and arrived at McChord Field the same day, the elapsed time being 8½ hours. From McChord Field the Army airmen were scheduled to fly to Wright Field and then on to Bolling Field, returning to Ladd Field during the first week in November, weather permitting.

During the course of one of his frequent flights around Alaska, Major Everett S. Davis, Commanding Officer of the Air Corps Detachment at Elmendorf Field, Anchorage, Alaska, and Air Officer, Alaska Defense Force, under Brigadier General Simon B. Buckner, landed at Ladd Field after dark on October 28th in a B-10, with only one motor working. He had flown from Ladd Field to Nome, where he had picked up several large packages of fur-lined Eskimo clothing, made by the Eskimos for the troops at Ladd Field. Upon returning to that Field from Nome, two cylinders on the right motor blew out. The motor failure occurred when he was flying over Ruby, located on the Yukon River, and approximately 250 miles from Ladd Field. Despite the fact that he was heavily loaded with freight and that he could rely on only one motor, Major Davis elected to come on to Ladd Field. He made an excellent night landing on the one-mile concrete runway, which was lined with tin can flares. Major Davis was accompanied by his crew chief, Staff Sergeant J.A. Grady. He was flown to Anchorage the following day by Captain W.H. Neal in the O-38, the B-10 remaining at Ladd Field for an engine change.

---oOo---

AERIAL-GROUND REVIEW AT MacDILL FIELD

MacDill Field, Tampa, Fla., had its first combined aerial and ground review on November 9th on the nearly completed east-west runway. Brigadier General Clarence L. Tinker and his staff rode past the lines of troops and spotless motorized equipment on the runway, after which he repaired to the reviewing stand to witness the procession of 1,000 troops, and the aerial show, consisting of 13 B-18's, led by Lieut. Colonel Vincent J. Meloy, Commanding Officer of the 29th Bombardment Group.

---oOo---

Statistics on Classes at Randolph Field

(Continued from Page 18)

more man-hours were flown from November 12th to 14th, inclusive, than during any other three consecutive days since the founding of Randolph Field. As compared with an average daily of 1200 man-hours, approximately 2200 man-hours were flown per day during the above mentioned period.

---oOo---

Lt. Col. Arthur B. McDaniel, Office of Chief of Air Corps, Washington, was ordered to duty at Spokane, Wash.

RATINGS AND PAY FOR PARACHUTE TROOPS

Under date of November 23, 1940, the War Department announced that all officers, warrant officers and enlisted men of the Regular Army and National Guard of the United States, (exclusive of parachute mechanics of the Air Corps), and officers of the Officers' Reserve Corps who are members of Parachute Battalions or other Parachute units, for whom parachute jumping is an essential part of their military duty may be rated as "Parachutists." Included in this category are students attending Parachute Jumping Schools. Rated Parachutists will be provided additional compensation.

Officers and warrant officers will be rated "Parachutists" by the War Department upon approved recommendations of commanders concerned.

Until such time as a fixed monthly amount is authorized by legislation as additional compensation for both the flying risk and risks connected with the parachute jump proper, officers and warrant officers rated as Parachutists will be placed on flying pay status. Officers assigned to Parachute Battalions or similar units whose duties require frequent flights in airplanes but who are not rated Parachutists, and officers undergoing instruction in parachute jumping prior to the time they receive a rating as Parachutists will also be placed on flying pay status. Recommendations of officers to be placed on this status will be made to the War Department by commanders concerned.

An enlisted man will be rated as a Parachutist by the commander of the Parachute Battalion, other Parachute units, or Parachute Jumping School of which he is a member. Enlisted men who are rated as Parachutists will receive a Specialist 1st Class rating. The number of enlisted men who can be rated as Parachutists is therefore restricted by the allotment of Specialist 1st Class ratings to the unit concerned. The Specialist 1st Class rating of a Parachutist is made to provide additional compensation for both the flying risk and risks connected with the parachute jump proper.

In addition to enlisted men rated as Parachutists within the authorized number of specialist ratings allotted for this purpose, the Specialist 1st Class rating may also be given to enlisted men on duty as instructors at a Parachute Training School in a jumping capacity, and to enlisted men undergoing instruction in parachute jumping prior to the time they receive the rating of Parachutist.

Enlisted men rated as Specialist 1st Class for these purposes will not be placed nor will they be maintained on flying pay status.

To provide sufficient Specialist 1st Class ratings for enlisted men who qualify as Parachutists, the allotment of grades and ratings to the 501st Parachute Battalion (now in training at Fort Benning, Ga.,) has been increased by 363 Specialist 1st Class ratings and decreased by 57 Specialist 2nd Class ratings.

---oOo---

CRASH BOAT TESTED

In a recent test, the crash boat at Hamilton Field, Calif., set a record for other craft of this type to shoot at. With a darkened boat simulating an airplane that had been forced down on the bay some five miles from the base, they were called by telephone, and in 40 seconds the boat roared away from the wharf and skittered across the dark waters of San Francisco Bay in its search. Nineteen minutes later, the specially designed boat nosed up to its quarry and prepared to take off the personnel. The task of the boat crew, headed by Sergeant Stanley Baker, Quartermaster Corps, was greatly complicated not only by the darkness but also the fact that strong winds and tides constantly prevail in the bay, causing rapid drift of a floating object and requiring careful calculation and frequent reference to charts and tables in plotting its probable position.

The Post Commander expressed himself as being highly pleased with the performance of the "Hamilton Field Navy."

---oOo---

CHANGES IN DUTIES OF GENERAL OFFICERS

Special Orders of the War Department, recently issued, direct the following changes in the status of general officers assigned to the Air Corps, viz:

Brigadier General Follett Bradley, stationed at San Juan, Puerto Rico, is designated as the Commanding General of the 13th Composite Wing.

Brigadier General John C. McDonnell is relieved from assignment and duty with the 3rd Bombardment Group, with station at Savannah, Ga., and assigned to command of the 7th Pursuit Wing, GHQ Air Force, Mitchel Field, L.I., N.Y.

Brigadier General Oliver P. Echols is relieved from assignment and duty as officer in charge of research, procurement, supply and maintenance activities of the Materiel Division, Dayton, Ohio, and from additional duty as Commandant of the A.C. Engineering School, and assigned to Office Chief of the Air Corps.

8TH PURSUIT GROUP MOVES TO MITCHEL

Nearly a thousand officers and enlisted men of the 8th Pursuit Group (F), Langley Field, Va., placed the final bit of polish on their 95 airplanes preparatory to the permanent transfer of that organization to Mitchel Field, New York, on November 14, 1940.

Members of the Langley Field garrison since 1932 - when the Group was activated after nine years on the inactive list, the Pursuiters, or "Peashooters," as they are effectionately known by their bombardier and air base comrades, will be missed by both the military personnel of Langley Field and the civilian population of the Peninsula. Some of the enlisted men have been at this field for a decade or more.

The commander of the 8th Pursuit Group since February 1, 1940, is the World War veteran, Major Edward M. Morris, Air Corps, who since that date has watched the Group's airplanes change from a preponderance of Curtiss P-36's to the present majority of Curtiss P-40's.

Seventy motor vehicles were utilized to transport a large number of the men to their new station, these including passenger cars, trucks, reconnaissance cars, etc. There were 117 commissioned officers and over 800 enlisted men of the Fighter Group in the movement.

Of the 95 airplanes transferred to Mitchel Field, six were Curtiss P-36's and 81 Curtiss P-40's, 5 North American AT-6 Advanced Trainers and 3 Martin B-10BM Bombers.

The 8th Pursuit Group is composed of four smaller units, viz:

Headquarters and Headquarters Squadron, commanded by 1st Lieut. Ernest F. Williams, Air Reserve;

33rd Pursuit Squadron, commanded by Captain Romulus H. Puryear, Air Corps;

35th Pursuit Squadron, commanded by Captain Francis H. Griswold, Air Corps;

36th Pursuit Squadron, commanded by Captain Frederic H. Smith, Jr., Air Corps.

Major Milton J. Smith is the Executive Officer of the Group.

During the World War the 33rd Squadron served in England mainly as an instruction unit. Immediately after the war it was inactive until its activation at Langley Field in 1932.

The 35th Squadron also had technical duties during the World War, both in England and France. The Squadron chose the panther for its insignia because, though small and wiry, this animal makes up for its size by its bold audacity in fearlessly attacking its enemies.

The 36th Pursuit Squadron was made active in 1930, about two years before it came to Langley Field where, since its arrival, its members have earned the title of Flying Fiends, adopting as an airplane marking a spirit with all the characteristics of Mars, god of war, a spirit that likes its work.

Since becoming a fighter unit early this year, the pilots of the 8th Pursuit Group have been using the Curtiss P-36's and P-40's to perfect their technique in wartime missions. In the event of hostilities these missions will consist of attacking and destroying enemy aircraft, providing escorts for Bombardment or Observation craft to and from their objectives, and assisting the ground arms of the defending armies.

As the Group is a part of that strictly M-Day organization, the GHQ Air Force, instant readiness for national defense is one of its most important objectives.

---oOo---

PROGRESS AT FORT DOUGLAS, UTAH, AIR BASE

"Mud gets in our eyes, not to mention ears and mouths, these days, but we're 'mudding' through nicely, thank you," says the News Letter Correspondent of the 9th Bombardment Squadron (H), Municipal Airport, Salt Lake City, Utah. He adds that "it's getting cold now, so that besides learning how to taxi safely over soft ground we're finding out what peculiarities a B-17B is subject to when it gets thoroughly chilled. The older pilots are learning things they never knew before, while the younger ones are getting all-weather flying in one big lump.

"Maintenance is rather difficult since it is all of the 'field' variety, and our tent offices are still downright cold despite the puny efforts of the QM's Sibley stove. Though we manage to show a respectable flying schedule completed at the end of each day, we'll be glad to get the buildings, taxi strips and runways. Also, we hope Santa Claus and the supply departments produce a few more winter flying suits.

"We're doing a lot of bombing, both day and night, and will soon qualify a new batch of officer bombardiers. Instrument checks are in progress and the new officers are about finished with dead reckoning navigation and looking forward to celestial navigation. One-thousand-mile navigation missions, under Major Adler and Captain Wilson, were flown to Mitchel Field. Captain Carmichael, Lieuts. Bradley and Meals were among those in the crews.

"Aerial gunnery is being emphasized now with three days on the range each week. The problem of firing .50 caliber

(Continued on Page 22)

ADVANCED FLYING TRAINING SCHOOL AT MAXWELL FIELD

Class SE-41-A, Air Corps Flying School, Maxwell Field, Ala., got under way on November 16, with two student officers and one hundred and two Flying Cadets in attendance. Incidentally, this is the initial Advanced class to be conducted at this station, which was converted from an Air Corps Tactical School on July 1. The transition from the basic phase was effected without any "conking" or "cutting out" as the basics had been undergoing instruction at Maxwell Field pending completion of construction of their set-up at the Municipal Airport, Montgomery, Ala.

The trainees have been divided into two Advanced Training Groups. The program of instruction which they have undertaken is to consist of approximately 70 hours of flying and 56 hours ground school. This is broken down substantially as follows: 15 hours--transition, individual and accuracy (dual and solo); 18 hours--formation and time distance problems; 13 hours--instrument and radio beacon (plus instrument flying) (link trainer--10 hours); 2 hours--night flying, local (dual and solo); 13 hours--day navigation; 9 hours--night navigation.

Ground school instruction: 4 hours--bombardment aviation; 6 hours--code practice (each student to maintain proficiency at 8 words per minute); 4 hours--combat orders; 6 hours--military organization; 2 hours--observation aviation; 2 hours--pursuit aviation; 4 hours--signal communications; 20 hours--squadron duties junior officers; 8 hours--air navigation; 30 hours--military training.

The Advanced Flying School is commanded by Lieut. Col. Floyd E. Galloway. His staff consists of:

Capt. Burton M. Hovey,Jr., Director of Training.

Capt. Geo. P. Moody, Director of Ground Training.

Capt. Meredith M. Watson, Commandant of Flying Cadets and Student officers.

Capt. Wm. J. Holzapfel, Jr., Secretary

Capt. Troup Miller, Jr., Commanding Officer, Advanced Training Group I.

Capt. Kurt M. Landon, Commanding Officer, Advanced Training Group II.

Students in attendance in Class 41-A:

Regular Army Officers

Capt. Stanley T. Wray 1st Lieut. John W. Watt

Flying Cadets

Wm. K. Ashby	Russell E. Callison
Fred H. Barrett	James C. Cavendish
John A. Bemel	Roy H. Conaway
Andrew J. Bing	Dayton W. Countryman
John Blakeslee	Adelbert D. Cross
Irving W. Boswell	Arthur V. Cullen, Jr.
Gordon L. Brandt	Daniel E. Culver, Jr.
John J. Brennan	Emmet P. Davis
Richard L. Brown	Fred P. Dollenberg
Harry R. Burrell	Wilfred C. Dorn
Fenton H. Butler	Gerald R. DuKet
Paul M. Butnen	Frank B. Elliott
Robert J. Fitzgerald	James L. Murray
John E. Frizen	Lloyd W. Nash
Frank S. Gardner	Merrill F. Patrick
Leonard T. Geyer	Thomas E. Persinger
Richard B. Giblin	Oren J. Poage
James A. Gibson	Kenneth H. Potter
Francis L. Brable	Chas. E. Powell, Jr.
Chas. E. Griffith	Robt. P. Powers
Robert E. Guay	James D. Robinson
Harold F. Gwynn	Derrol W. Rogers
Russell H. Hahn	James W. Rogers
Robt. T. Hall, Jr.	Andrew R. Schindler
Earl J. Harrington	Earl S. Schofield, Jr
Wm. G. R. Harris	Giovanni M. Sena
Douglas H. Hatfield	Herbert L. Seubert
Leonard M. Hauprich	Richard A. B. Shedden
Robert A. Hearn, Jr.	Harry W. Shoup
Chas. J. Hoey	Herman F. Smith
Donald E. Houseal	Meryl M. Smith
Roland L. Hudson	Raymond M. Smith
Donald J. Humphrey	Douglas W. Spawn
Virgil Ingram, Jr.	Robt. G. Stinson
Robert R. Jones	James J. Stone, Jr.
Richard J. Kerry	Frank L. Thomas
Kenneth K. Klingensmith	Alvin O. Tingle
Herbert D. Kneeland, Jr.	Clarence S. Towles, Jr.
Wm. P. Koch	David B. Tudor
James G. Kohlwes	Robt. W. Ulichny
Walter E. Kutschera	Geo. W. Von Arb, Jr.
Thomas J. Lynch	Wm. G. Walker, Jr.
Rowley W. Martin	Edw. B. Wallis
Richard H. May	Michael Waslenko, Jr.
Geo. O. McCafferty	Thomas F. Weldon
Murro A. McCracken	Samuel Whiting
Gus J. Mehess	Geo. K. Williams
Howard W. Merkel	Charles E. Wilson
John F. Miller	Keith S. Wood
Chas. E. Moore	Louis B. Zanbon
Wm. W. Morris, Jr.	Jean L. Ziegler

---oOo---

Progress at Fort Douglas Air Base

(Continued from Page 21)

from the B-17's, as well as the attendant headache of what to use to tow a target, is occupying the attention of our best minds. We expect a solution in the near future. In preparation for this, all officers and all combat crews recently completed ground gunnery with the 50's."

---oOo---

Gunnery Training at Camp Skeel, Mich.

Personnel of the 41st Pursuit Squadron, recently transferred to Selfridge Field, Mich., from Bolling Field, D.C., and commanded by Captain Paul B. Wurtsmith, departed on November 28th for Camp Skeel, Oscoda, Mich., for an indefinite stay to carry on ground and aerial gunnery training under winter conditions. On the heels of the departure of the 41st, the 39th Pursuit Squadron, commanded by Captain A.R. Springer, returned to Selfridge Field, having been stationed at Camp Skeel since September 1st.